

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the method~~ comprising:

determining a present need to pause traffic to a network device; and
responsive to the determining,

placing in a type/length field in a frame, a value signifying the frame indicates that
traffic flow to the network device should be paused in a type/length field in the
frame;

placing in an opcode field in the frame, a value signifying that traffic flow to the
network device should be paused or not paused according to its priority level in an
opcode field in the frame;

creating a priority mask field in the frame; and

placing in the priority mask field, a value signifying which priority levels should be
paused in said priority mask field in the frame.

2. (Currently Amended) The method of claim 1, wherein the said placing a value signifying that traffic flow should be paused or not paused according to its priority level in an opcode field in the frame includes placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for time indicated by a pause time field in the frame without regard for the said priority level,

in an opcode field in the frame if it is desired to use the same pause time for each priority level.

3. (Currently Amended) The method of claim 1, wherein ~~the said placing a value signifying that traffic flow should be paused or not paused according to its priority level~~ in an opcode field in the frame includes placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for times corresponding to each priority level indicated by a pause time field, in an opcode field in the frame if it is not desired to use the same pause time for each priority level.
4. (Currently Amended) The method of claim 3, further comprising:
placing a separate value for each possible priority level in the said pause time field, the said separate value indicating an independent pause time for each corresponding priority level.
5. (Currently Amended) The method of claim 4, wherein the said pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priority levels.
6. (Original) The method of claim 1, wherein the frame is a PAUSE frame.
7. (Currently Amended) The method of claim 4, wherein the said value signifying that the frame indicates that traffic flow to the network device should be paused is identical to values used to indicate standard PAUSE frames.

8. (Currently Amended) The method of claim 4, wherein the said value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in the said opcode field.
9. (Currently Amended) A method ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the method~~ comprising:
determining a present need to pause traffic to a network device; and
responsive to the determining,
placing in a type/length field in a frame, a value signifying that traffic flow to the
network device should be paused or not paused according to its priority level in an
type/length field in the frame;
creating a priority mask field in the frame; and
placing in the priority mask field, a value signifying which priority levels should be
paused in said priority mask field in the frame.
10. (Currently Amended) The method of claim 9, further comprising:
placing in an opcode field in the frame, a value signifying that the pausing will be for time
indicated by a pause time field in the frame without regard for the said priority level in
an opcode field in the frame if it is desired to use the same pause time for each priority.
11. (Currently Amended) The method of claim 9, further comprising:

placing in an opcode field in the frame, a value signifying that the pausing will be for times corresponding to each priority level indicated by a pause time field ~~in an opcode field in the frame~~ if it is desired to use the same pause time for each priority.

12. (Currently Amended) The method of claim 11, further comprising:

placing in the pause time field, a separate value for each possible priority level ~~in said pause time field~~, the said separate value indicating an independent pause time for each corresponding priority level.

13. (Currently Amended) The method of claim 12, wherein the said pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priorities.

14. (Original) The method of claim 9, wherein the frame is a PAUSE frame.

15. (Currently Amended) The method of claim 9, wherein the said value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in the said type/length field.

16. (Currently Amended) A method ~~for handling a frame in a network with traffic flow having varying priority levels~~, the method comprising:
examining a value in a type/length field in a the frame to determine if it signifies that the frame indicates that traffic flow ~~should be paused~~ to a network device should be paused;

examining a value in an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, if the said value in the said type/length field signified that the frame indicates that traffic flow ~~should be paused~~ to the a network device should be paused; and pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the said value in the said opcode field signified that traffic flow to the network device should be paused or not paused according to its priority level and if the said value in the said type/length field signified that the frame indicates that traffic flow ~~should be paused~~ to the a network device should be paused.

17. (Currently Amended) The method of claim 16, wherein the said examining a value in an opcode field further comprises examining a value in the said opcode field to determine if it also signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level and the said pausing traffic flow further comprises pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for a time period indicated by the pause time field in the frame without regard to priority level if the said opcode field signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level.
18. (Currently Amended) The method of claim 16, wherein the said examining a value in an opcode field further comprises examining a value in the said opcode field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time and the said pausing traffic flow further comprises pausing traffic flow to

the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for time periods indicated by a times corresponding to each priority level in a pause time field in the frame if the said opcode field signifies that the pausing will be for times corresponding to each priority level indicated by a pause time.

19. (Currently Amended) The method of claim 18, wherein the said times are a separate value for each possible priority level indicating an independent pause time for each corresponding priority level.

20. (Currently Amended) A method ~~for handling a frame in a network with traffic flow having varying priority levels, the method~~ comprising:

examining a value in a type/length field in ~~a~~ the frame to determine if it signifies that the frame indicates that traffic flow ~~should be paused~~ to a network device should be paused and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level; and
pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the said value in the said type/length field signified that traffic flow ~~should be paused~~ to a network device should be paused and that traffic flow to the network device should be paused or not paused according to its priority level.

21. (Currently Amended) The method of claim 20, further comprising:

examining a value in an opcode field in the frame to determine if it signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level; and

wherein the said pausing traffic flow further comprises pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for a time period indicated by the pause time field in the frame without regard to priority level if the said value in the said opcode field signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level.

22. (Currently Amended) The method of claim 20, further comprising:

examining a value in the said type/length field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time; and

wherein the said pausing traffic flow further comprises pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for time periods indicated by a times corresponding to each priority level in a pause time field in the frame if the said type/length field signifies that the pausing will be for times corresponding to each priority level indicated by a pause time.

23. (Currently Amended) The method of claim 22, wherein the said times are a separate value for each possible priority level indicating an independent pause time for each corresponding priority level.

24. (Currently Amended) An apparatus ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the apparatus comprising:~~

- a pause traffic flow value-to-type/length field placer configured to, if a present need to pause traffic to a network device is determined, place in a type/length field in a frame, a value signifying the frame indicates that traffic flow to the network device should be paused;
- a priority level based pause traffic flow value-to-opcode field placer coupled to the said pause traffic flow value-to-type/length field placer and configured to place in an opcode field in the frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level;
- a priority mask field creator coupled to the said priority level based pause traffic flow value-to-opcode field placer and configured to create a priority mask in the frame; and
- a paused priority level value-to-priority mask field placer coupled to the said priority mask field creator and configured to place in the priority mask field, a value signifying which priority levels should be paused.

25. (Currently Amended) The apparatus of claim 24, wherein the said priority level based pause traffic flow value-to-opcode field placer includes a pause time without regard for priority level value-to-opcode field placer configured to place a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for time indicated by a pause time field in the frame without regard for the priority level, in an opcode field in the frame if it is desired to use the same pause time for each priority level.

26. (Currently Amended) The apparatus of claim 24, wherein the said priority level based pause traffic flow value-to-opcode field placer includes a pause times corresponding to priority level value-to-opcode field placer configured to place a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for times corresponding to each priority level indicated by a pause time field, in an opcode field in the frame if it is not desired to use the same pause time for each priority level.
27. (Currently Amended) The apparatus of claim 26, further comprising:
a priority level separate value-to-pause time field placer coupled to the said priority level based pause traffic flow value-to-opcode field placer configured to place a separate value for each possible priority level in the pause time field, the separate value indicating an independent pause time for each corresponding priority level.
28. (Currently Amended) An apparatus ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the apparatus~~ comprising:
a priority level based pause traffic flow value-to-type/length field placer configured to, if a present need to pause traffic to a network device is determined, place in a type/length field in a frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level;
a priority mask field creator coupled to the said priority level based pause traffic flow value-to-type/length field placer and configured to create a priority mask field in the frame;
and

a paused priority level value-to-priority mask field placer coupled to the said priority mask field creator and configured to place in the priority mask field, a value signifying which priority levels should be paused.

29. (Currently Amended) The apparatus of claim 28, further comprising:

a pause time without regard for priority level value-to-opcode field placer coupled to the said priority level based pause traffic flow value-to-type/length field placer and configured to place in an opcode field in the frame, a value signifying that the pausing will be for time indicated by a pause time field in the frame without regard for the priority level if it is desired to use the same pause time for each priority.

30. (Currently Amended) The apparatus of claim 28, further comprising:

a pause times corresponding to priority level value-to-opcode field placer coupled to the said priority level based pause traffic flow value-to-type/length field placer and configured to place in an opcode field in the frame, a value signifying that the pausing will be for times corresponding to each priority level indicated by a pause time field if it is desired to use the same pause time for each priority.

31. (Currently Amended) The apparatus of claim 30, further comprising:

a priority level separate value-to-pause time field placer coupled to the said pause times corresponding to priority level value-to-opcode field placer and configured to place in the pause time field, a separate value for each possible priority level, the separate value indicating an independent pause time for each corresponding priority level.

32. (Currently Amended) An ~~The apparatus for handling a frame in a network with traffic flow having varying priority levels, the method comprising:~~

a type/length field value examiner configured to examine a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused;

an opcode field value examiner coupled to the said type/length field value examiner and configured to examine a value in an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, if the value in the type/length field signified that the frame indicates that traffic flow to the network device should be paused; and

a priority level traffic flow pauser coupled to the said opcode field value examiner configured to pause traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the value in the opcode field signified that traffic flow to the network device should be paused or not paused according to its priority level and if the value in the type/length field signified that the frame indicates that traffic flow to the network device should be paused.

33. (Currently Amended) An ~~The apparatus for handling a frame in a network with traffic flow having varying priority levels, the method comprising:~~

a type/length field value examiner configured to examine a value in a type/length field in a frame to determine if it signifies that the frame indicates that traffic flow to a network device should be paused and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level; and

a priority level traffic flow pauser coupled to the said type/length field value examiner and configured to pause traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the value in the type/length field signified that traffic flow to a network device should be paused and that traffic flow to the network device should be paused or not paused according to its priority level.

34. (Currently Amended) An apparatus for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the apparatus comprising:

means for determining a present need to pause traffic to a network device; and

means for, responsive to the determining,

means for placing in a type/length field in a frame, a value signifying the frame indicates that traffic flow to the network device should be paused in a type/length field in the frame;

means for placing in an opcode field in the frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level in an opcode field in the frame;

means for creating a priority mask field in the frame; and

means for placing in the priority mask field, a value signifying which priority levels should be paused in said priority mask field in the frame.

- 35 (Currently Amended) The apparatus of claim 34, wherein the said means for placing a value signifying that traffic flow should be paused or not paused according to its priority level in

an opcode field in the frame includes means for placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for time indicated by a pause time field in the frame without regard for the said priority level, in an opcode field in the frame if it is desired to use the same pause time for each priority level.

36. (Currently Amended) The apparatus of claim 34, wherein the said means for placing a value signifying that traffic flow should be paused or not paused according to its priority level in an opcode field in the frame includes means for placing a value signifying that traffic flow to the network device should be paused or not paused according to its priority level, and that the pausing will be for times corresponding to each priority level indicated by a pause time field, in an opcode field in the frame if it is not desired to use the same pause time for each priority level.

37. (Currently Amended) The apparatus of claim 36, further comprising:
means for placing a separate value for each possible priority level in the said pause time field, the said separate value indicating an independent pause time for each corresponding priority level.

38. (Currently Amended) The apparatus of claim 37, wherein the said pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priority levels.

39. (Original) The apparatus of claim 34, wherein the frame is a PAUSE frame.

40. (Currently Amended) The apparatus of claim 37, wherein the said value signifying that the frame indicates that traffic flow to the network device should be paused is identical to values used to indicate standard PAUSE frames.
41. (Currently Amended) The apparatus of claim 37, wherein the said value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in the said opcode field.
42. (Currently Amended) An apparatus ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels, the apparatus comprising:~~
means for determining a present need to pause traffic to a network device; and
means for, responsive to the determining,
means for placing in a type/length field in a frame, a value signifying that traffic flow to the network device should be paused or not paused according to its priority level in an type/length field in the frame;
~~means for creating a priority mask field in the frame; and~~
~~means for placing in the priority mask field,~~ a value signifying which priority levels should be paused ~~in said priority mask field in the frame.~~
43. (Currently Amended) The apparatus of claim 42, further comprising:
means for placing in an opcode field in the frame, a value signifying that the pausing will be for time indicated by a pause time field in the frame without regard for the said priority

level ~~in an opcode field in the frame~~ if it is desired to use the same pause time for each priority.

44. (Currently Amended) The apparatus of claim 42, further comprising:

means for placing in an opcode field in the frame, a value signifying that the pausing will be for times corresponding to each priority level indicated by a pause time field ~~in an opcode field in the frame~~ if it is desired to use the same pause time for each priority.

45. (Currently Amended) The apparatus of claim 44, further comprising:

means for placing in the pause time field, a separate value for each possible priority level ~~in said pause time field~~, the said separate value indicating an independent pause time for each corresponding priority level.

46. (Currently Amended) The apparatus of claim 45, wherein the said pause time field is equal in size to the pause time field in a standard PAUSE frame multiplied by the number of possible priorities.

47. (Original) The apparatus of claim 42, wherein the frame is a PAUSE frame.

48. (Currently Amended) The apparatus of claim 42, wherein the said value signifying that traffic flow to the network device should be paused or not paused according to its priority level is a value not used by standard PAUSE frames in the said type/length field.

49. (Currently Amended) An apparatus ~~for handling a frame in a network with traffic flow having varying priority levels, the apparatus~~ comprising:

means for examining a value in a type/length field in ~~a~~ the frame to determine if it signifies that the frame indicates that traffic flow ~~should be paused~~ to a network device should be paused;

means for examining a value in an opcode field in the frame to determine if it signifies that traffic flow to the network device should be paused or not paused according to its priority level, if the said value in the said type/length field signified that the frame indicates that traffic flow ~~should be paused~~ to the a network device should be paused;

and

means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the said value in the said opcode field signified that traffic flow to the network device should be paused or not paused according to its priority level and if the said value in the said type/length field signified that the frame indicates that traffic flow ~~should be paused~~ to the a network device should be paused.

50. (Currently Amended) The apparatus of claim 49, wherein the said means for examining a value in an opcode field further comprises means for examining a value in the said opcode field to determine if it also signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level and the said means for pausing traffic flow further comprises means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for a time period indicated by the pause time field in the frame without regard to priority level if

the said opcode field signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level.

51. (Currently Amended) The apparatus of claim 49, wherein the said means for examining a value in an opcode field further comprises means for examining a value in the said opcode field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time and the said means for pausing traffic flow further comprises means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for time periods indicated by a times corresponding to each priority level in a pause time field in the frame if the said opcode field signifies that the pausing will be for times corresponding to each priority level indicated by a pause time.
52. (Currently Amended) The apparatus of claim 51, wherein the said times are a separate value for each possible priority level indicating an independent pause time for each corresponding priority level.
53. (Currently Amended) An apparatus ~~for handling a frame in a network with traffic flow having varying priority levels, the apparatus~~ comprising:
means for examining a value in a type/length field in ~~a the~~ frame to determine if it signifies that the frame indicates that traffic flow ~~should be paused~~ to a network device should be paused and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level; and

means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if the said value in the said type/length field signified that traffic flow ~~should be paused~~ to the a network device ~~should be paused~~ and that traffic flow to the network device should be paused or not paused according to its priority level .

54. (Currently Amended) The apparatus of claim 53, further comprising:

means for examining a value in an opcode field in the frame to determine if it signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level; and

wherein the said means for pausing traffic flow further comprises means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for a time period indicated by the pause time field in the frame without regard to priority level if the said value in the said opcode field signifies that the pausing will be for time indicated by a pause time field in the frame without regard to priority level.

55. (Currently Amended) The apparatus of claim 53, further comprising:

means for examining a value in the said type/length field to determine if it also signifies that the pausing will be for times corresponding to each priority level indicated by a pause time; and

wherein the said means for pausing traffic flow further comprises means for pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame for time periods indicated by a times

corresponding to each priority level in a pause time field in the frame if the said
type/length field signifies that the pausing will be for times corresponding to each
priority level indicated by a pause time.

56. (Currently Amended) The apparatus of claim 55, wherein the said times are a separate value
for each possible priority level indicating an independent pause time for each corresponding
priority level.

57. (Currently Amended) A program storage device readable by a machine, tangibly embodying
a program of instructions executable by the machine to perform a method ~~for generating a~~
~~frame indicating that traffic flow should be paused to a network device, the traffic flow~~
~~having varying priority levels~~, the method comprising:
determining a present need to pause traffic to a network device; and
responsive to the determining,

placing in a type/length field in a frame, a value signifying the frame indicates that
traffic flow to the network device should be paused ~~in a type/length field in the~~
frame;

placing in an opcode field in the frame, a value signifying that traffic flow to the
network device should be paused or not paused according to its priority level ~~in an~~
~~opcode field in the frame~~;

creating a priority mask field in the frame; and

placing in the priority mask field, a value signifying which priority levels should be
paused ~~in said priority mask field in the frame~~.

58. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method ~~for generating a frame indicating that traffic flow should be paused to a network device, the traffic flow having varying priority levels~~, the method comprising:
determining a present need to pause traffic to a network device; and
responsive to the determining,

placing in a type/length field in a frame, a value signifying that traffic flow to the
network device should be paused or not paused according to its priority level in an
type/length field in the frame;
creating a priority mask field in the frame; and
placing in the priority mask field, a value signifying which priority levels should be
paused in said priority mask field in the frame.

59. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method ~~for handling a frame in a network with traffic flow having varying priority levels~~, the method comprising:
examining a value in a type/length field in ~~a~~ the frame to determine if it signifies that the
frame indicates that traffic flow ~~should be paused~~ to a network device should be paused;
examining a value in an opcode field in the frame to determine if it signifies that traffic flow
to the network device should be paused or not paused according to its priority level, if
the said value in the said type/length field signified that the frame indicates that traffic
flow should be paused to the a network device should be paused; and
pausing traffic flow to the network device with priority levels corresponding to levels
signified by a value in a priority mask field in the frame if the said value in the said

opcode field signified that traffic flow to the network device should be paused or not paused according to its priority level and if ~~the~~ said value in ~~the~~ said type/length field signified that the frame indicates that traffic flow ~~should be paused to the~~ a network device should be paused.

60. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method ~~for handling a frame in a network with traffic flow having varying priority levels~~, the method comprising: examining a value in a type/length field in ~~a~~ the frame to determine if it signifies that the frame indicates that traffic flow ~~should be paused~~ to a network device should be paused and if it signifies that traffic flow to the network device should be paused or not paused according to its priority level; and pausing traffic flow to the network device with priority levels corresponding to levels signified by a value in a priority mask field in the frame if ~~the~~ said value in ~~the~~ said type/length field signified that traffic flow ~~should be paused~~ to a network device should be paused and that traffic flow to the network device should be paused or not paused according to its priority level.